

## SUPERFUND: THE FIRST PROGRAM OF ITS KIND

It was late 1970, and the threat of hazardous wastes to human health was catapulted to national attention by Love Canal near Niagara Falls, New York. The government declared it a disaster area when massive amounts of abandoned, buried hazardous waste were found to cause extensive contamination and pose an immediate threat to human health. While the Resource Conservation and Recovery Act (RCRA) of 1976 established a regulatory system to manage hazardous wastes from the time they're generated to their final disposal, it became acutely apparent that a federal program was needed to respond to *immediate* hazards.

In 1980 Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. This law created a tax on the chemical and petroleum industries and provided federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Proceeds from the tax went into a trust fund to clean abandoned or uncontrolled hazardous waste sites. The taxing authority expired December 1995.

## HOW DOES SUPERFUND RESPOND?

Superfund responds to hazardous waste releases in two ways:

1. Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response. See page 6 for more information on Superfund's emergency removal program in West Virginia.
2. Long-term remedial response actions, that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening. Remedial cleanups are conducted at sites

listed on EPA's National Priorities List (NPL). See page 4 to review how a site gets listed on the NPL.

### IN SHORT, SUPERFUND WAS CREATED TO:

- establish requirements concerning closed and abandoned hazardous waste sites
- make parties responsible for releases of hazardous waste at these sites liable for cleanup
- establish a trust fund to provide for cleanup when no responsible party can be identified

Cleaning a Superfund site is a complex, multi-year process, so 'completing construction' is a noteworthy milestone in the remedial process. A site meets this status when physical construction of all cleanup remedies is finished, all immediate threats have been addressed, and all long-term threats are under control.

# SUPERFUND: A BRIEF BACKGROUND

## SUPERFUND: EVOLVING TO MEET THE PUBLIC'S NEEDS

The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA in 1986, making several dramatic changes to the program including: increased state involvement in the Superfund process; greater citizen participation in site cleanup decisions; community right-to-know on companies' toxic emissions; greater focus on using innovative cleanup technologies, and improved enforcement authorities and settlement tools.

These tools have facilitated EPA's efforts to settle cases quickly and to ensure that potentially responsible parties (PRPs) for the sites pay their fair share of cleanup costs. Region III, at approximately 80 percent, outpaces the nation for the number of sites where responsible parties are designing upcoming Superfund cleanups. In addition, we've removed over 1600 small-volume waste contributors, the little guys who were caught in the liability web by other parties.

## SUPERFUND FOR A NEW MILLENIUM

Region III Superfund remains focused on completing construction at Superfund sites while continuing to implement the program's widely successful administrative reforms. Working closely with state and local partners, we're confident we can reach even more cleanup milestones using the newest and most innovative treatment technologies available today.

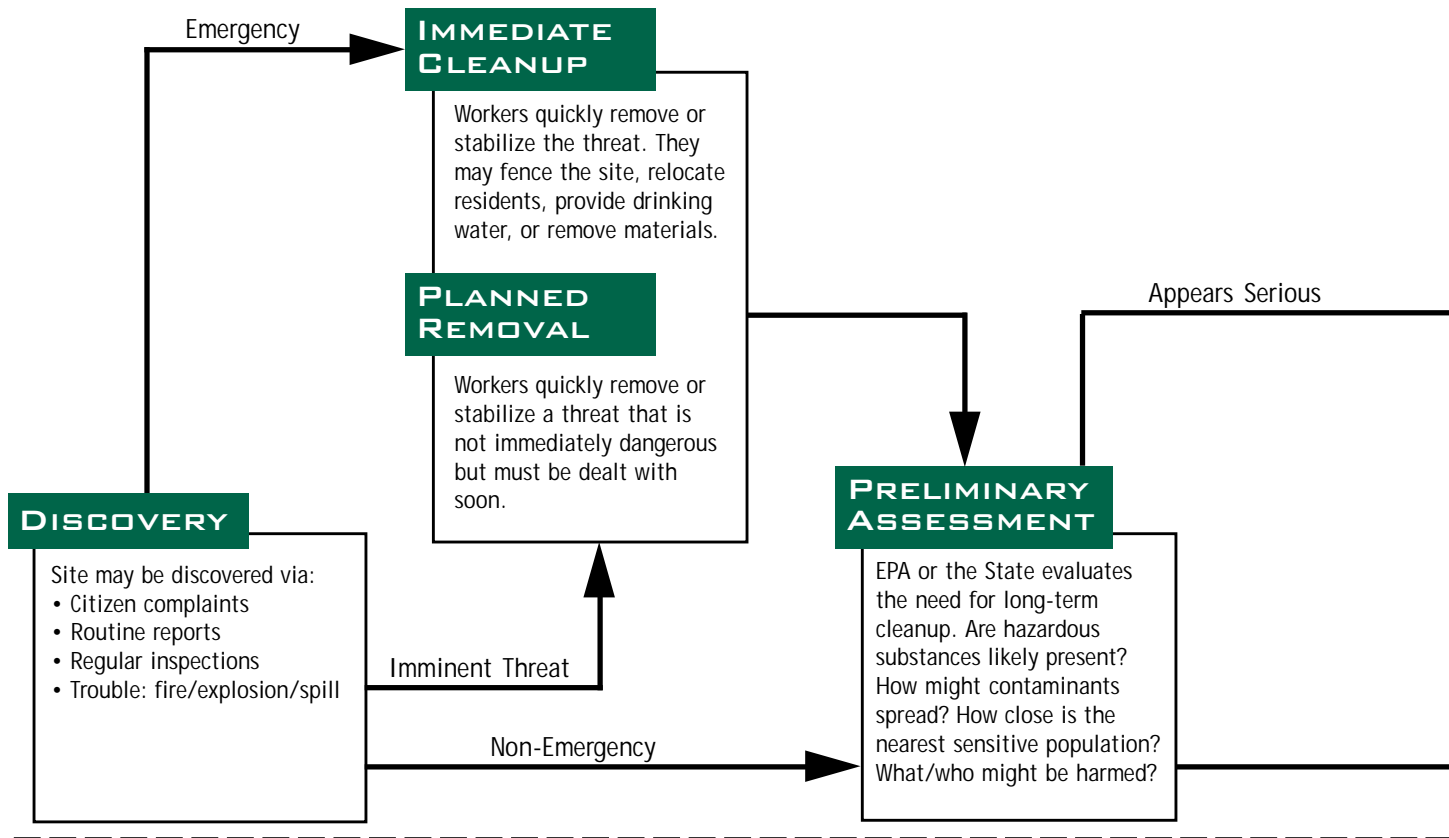
And the job doesn't end there. Once construction is complete, a considerable amount of work remains to ensure remedies remain protective. Region III currently performs regular five-year reviews at approximately 150 sites after construction has been completed, and this number is expected to rise in the following years as more and more sites are cleaned.

We are particularly proud of our work in selecting protective remedies that help set the stage for the redevelopment of Superfund sites. We firmly believe that proper consideration of a site's future reuse is necessary to selecting proper remedies, and we look forward to continued partnerships with communities, local and state governments to facilitate even more instances of productive reuse of once-hazardous waste sites.

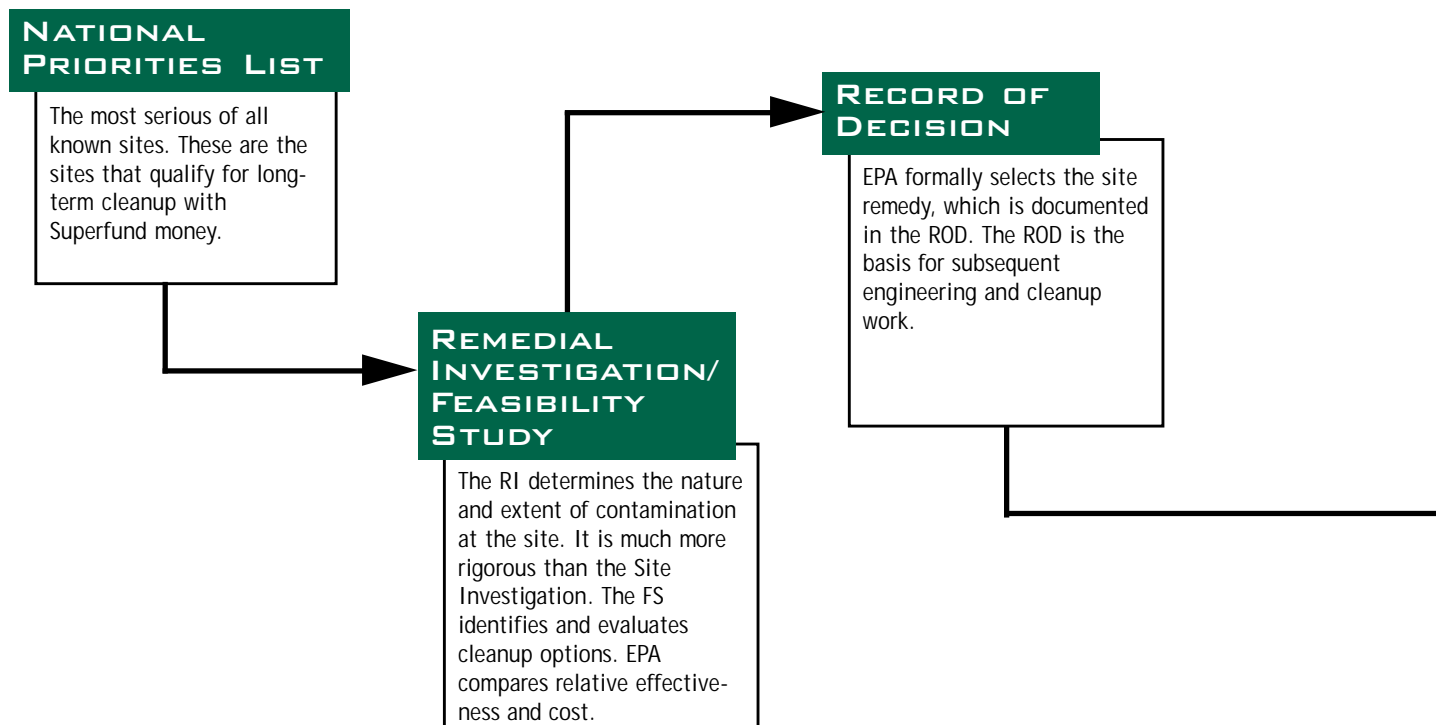
While Congress continues to struggle with another reauthorization of CERCLA and SARA, EPA has implemented three rounds of administrative reforms since 1993 to make Superfund even faster, fairer and more efficient. Broad in scope, these reforms have improved cleanup processes, focused on economic redevelopment issues, encouraged greater public participation, and empowered states. A strong indicator of the reforms' success is the fast-growing number sites on the NPL where construction has been completed.

# SUPERFUND TACKLES HAZARDOUS WASTE EMERGENCIES

## SITE DISCOVERY AND STUDY:



## LONG-TERM CLEANUP:



# Superfund 101

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graph LR; Start(( )) --> SI[SITE INSPECTION]; SI -- "May Be Dangerous" --> HRS[HAZARD RANKING SYSTEM]; SI -- "No Danger/No Further Action" --> NDA1[No Danger/No Further Action]; HRS -- "Above Cut-off Value" --> NPL[NATIONAL PRIORITIES LIST]; HRS -- "Below Cut-off Value" --> SIInv[SUPERFUND INVENTORY]; SIInv -- "No Danger/No Further Action" --> NDA2[No Danger/No Further Action];
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The flowchart illustrates the process for evaluating Superfund sites. It begins with a **SITE INSPECTION**, where investigators look for evidence of hazards. If the site is found to be **May Be Dangerous**, it proceeds to the **HAZARD RANKING SYSTEM**. Sites are scored and ranked based on whether wastes have or could spread through the environment to affect human and ecological health. If the score is **Above Cut-off Value**, the site is added to the **NATIONAL PRIORITIES LIST**, which includes the most serious sites for long-term cleanup. If the score is **Below Cut-off Value**, the site is added to the **SUPERFUND INVENTORY**, which includes sites where no further action is warranted. Both the **NATIONAL PRIORITIES LIST** and **SUPERFUND INVENTORY** have a path for **No Danger/No Further Action**, which leads to the final outcome.

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graph LR; Start(( )) --> RD[REMEDIAL DESIGN]; RD --> RA[REMEDIAL ACTION]; RA --> OM[OPERATION & MAINTENANCE]; OM --> D[DELETION];
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The flowchart illustrates the Superfund cleanup process through four sequential stages, each with a green header box and a white content box:

- REMEDIAL DESIGN**: Engineers design plans and specifications for cleanup activities. Environmental protection, decontamination, worker safety, and regulatory compliance are all "designed in."
- REMEDIAL ACTION**: These are the cleanup activities. They may be simply removing and disposing of drums of waste, or they may be complex and take years. Examples include cleaning polluted ground water or constructing multilayer caps over landfilled wastes.
- OPERATION & MAINTENANCE**: Long-term monitoring as well as O&M is often required after construction to ensure that the remedy continues to be effective in protecting human and ecological health. Some monitoring may go on for many years.
- DELETION**: Only after the remedy is constructed and all long-term monitoring is complete can EPA propose that the site be deleted from the NPL. The public must agree. O&M can continue after deletion.